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By - Andrews, Hans A.
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If the transfer student is to benefit from better articulation between 2- and 4-year institutions, factors affecting his success must be evaluated. When an admission policy is altered at the freshman level, it soon affects the transfer and his chance of success must be re-evaluated. Adequate counseling by the senior colleges should prevent a student from being admitted to an institution where he has little chance of success. This prospect of failure might be due to exacting upper-division requirements or to unsuitable preparation at certain junior colleges. To evaluate first-semester success of transfers from four different colleges, to see if there is a significant difference between GPA's earned at the different colleges and in the first semester after transfer, and to see if the 2.00 GPA requirement is realistic for transfers, three null hypotheses were tested: that there is no significant difference in (1) GPA in junior college and in first semester after transfer, (2) GPA's earned at the four different colleges, and (3) mean GPA drop in first semester among transfers from the four colleges. T' values were computed for the various correlations. Hypotheses one and three were rejected, hypothesis two was accepted. From the findings, it seems likely that the required 2.00 average may not be realistically high enough for transfers from certain Missouri junior colleges and that there is a possible need for diversity in admissions policies for transfers from certain colleges. (HH)

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EVALUATING THE FIRST SEMESTER SUCCESS OF JUNIOR COLLEGE TRANSFERS TO THE UNIVERSITY OF MISSOURI

Hans A. Andrews
University of Missouri

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The degree of success of the transfer student from junior colleges to colleges and universities is becoming an area of extreme interest and concern to those in both of these levels of higher education. The junior college is under considerable pressure to prove its students are prepared to compete at the college and university level. At this same time, many colleges and universities are under substantial pressure to limit their enrollments to students with outstanding high school academic records as well as to place a stronger emphasis upon graduate education. This study is designed to measure the success of junior college transfer students at the University of Missouri and to answer the following questions: Are transfer students from Missouri junior colleges able to successfully compete after transfer to the University of Missouri? Is the "C" (2.00) average presently required as a minimal grade point average for transfer realistic?

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A close evaluation of junior college transfers' records is of significant value in providing an honest appraisal of the junior college transferees chances for success at a college or university (Hills, 1965). In a study of junior college trans-

fers to Kansas State University (Hoyt, 1960), grade point averages were found to be substantially higher than those earned later at the University. The study also reveals differences in average scholastic aptitude scores among junior colleges as well as statistically significant differences in junior college grades for students from the different schools. The grade point average as an index for admission of transfer students has been challenged as a poor predictor and as being minimally correlated with subsequent grades received after transfer (Lunneborg and Lunneborg, 1967).

As colleges, universities and junior colleges work toward articulation improvement, all areas of concern relating to the transfer students' success must be considered if a high degree of improvement will result from articulation practices (Nelson, 1966; Kintzer, 1967; and Strawbridge and Wattenbarger, 1967). The recent pressure on senior colleges to accept a higher ability student at the freshman level (Bashaw, 1965) gives cause for a sincere concern by admissions policy committees at the senior colleges. The success of the junior college transfer needs to be evaluated each time the admissions policy is altered at the freshman intake level. Such changes ultimately affect the success of transfer students from the junior colleges (Hills, 1965).

In a national study (Knoell and Medsker, 1965), it was shown that junior college transfers average at least a .3 drop in grade point averages during their first term or semester after transfer. Knoell and Medsker also noted the wide differential in the grade point average drop between various two and four-year colleges.

The study further suggested that a junior college average of "C" should not be regarded as indication of future success at the upper division level of all institutions.

In a previous study of 284 junior college transfer students to the University of Missouri (Johnson, 1965), no significant differences were found in cumulative GPA's of the junior college transfer group and the four-year University of Missouri resident group. However, this study was limited to graduating seniors at the university during the 1963-64 academic year and did not study the success or failure of the junior college transfer during his first year after transfer.

In their articulation practices with junior colleges, the senior institutions must make every effort to provide counselors and advisement personnel with meaningful research data so that future transfer students will better understand their chances of success at the various upper-division colleges. Students have a right to expect not to be admitted to institutions where they have <u>very little</u> probability of being able to succeed.

Hoyt points to the necessity of looking at each junior college separately in his statement of "no matter how you 'type' junior colleges (urban-rural; public-private, etc.), enough diversity exists so that the only safe generalization is that you can't generalize." (Hoyt, 1967).

The future points to the fact that the transfer students will have to compete with an increasingly select group of native students (Knoell and Medsker, 1964).

Hypotheses

It was the purpose of this study (1) to evaluate the first-semester success of junior college transfer students from four selected Missouri junior colleges; and (2) to determine if there are any significant differences between grade point averages received at different junior colleges and the grade point averages received during the first semester after transfer to the University of Missouri; and (3) to determine if the 2.00 (C) minimum average required for transfer is realistic when compared to the first semester success that the junior college transfers can expect at the University of Missouri.

Specifically, the following null hypotheses were tested:

Hypothesis I: There is no significant differences to be expected in the GPA achieved in the junior college and the GPA achieved during the first semester after transfer to the University of Missouri.

Hypothesis II: There is no significant difference in the GPA received at the different junior colleges prior to transfer to the University of Missouri.

Hypothesis III: There is no significant difference in the mean GPA drop during the first semester after transfer among the four junior colleges' transfers.

Method

Data Collection and Subjects

The sample used in the study is composed of junior college transfers from the four largest feeder junior colleges (two public and two private) to the University of Missouri. The sample includes those transfers to the University of Missouri during the fall semesters of 1966 and 1967. Complete lists of transfer students were utilized from a junior college when the number of transfers from that particular college was small (40 or less). A random sample was taken from the lists of transfers where the number for any one year was large (above 40). A transfer's name was eliminated from the list if he had not enrolled in the university as a full-time student (12 credit hours) during the fall semester after transfer. A total of 239 transfer students make up the total sample. See table 1 for a more detailed breakdown of the sample.

Insert Table 1 About Here

A complete listing of junior college transfer students was provided on a print-off from the data processing center. A list of students from the four junior colleges to be studied was also compiled. Random samples were taken from the lists of students in excess of an N of 40 as was mentioned. The first semester GPA's for the transfers of 1967 were listed in the university total print-off list for the fall semester. All other point

averages and data had to be compiled by going directly to the permanent records section of the admissions office.

Data Analysis

In order to test the hypotheses, "t" values were computed between mean GPA's of individual junior colleges for prior to transfer and for one semester after transfer GPA's. They were also computed between mean GPA's for each college prior to transfer for both years of 1966 and 1967 and between mean GPA's received by each college for the two years after transfer (first semester). Grade point average was based on a four-point scale: A=4; B=3; C=2; D=1; F=0.

Analysis of variances were computed to determine significance of differences in GPA's among the four junior colleges prior to transfer and after transfer for the two years.

Results

The answer to the first purpose of this study, which was to evaluate the first semester success of junior college transfer students from the four selected junior colleges to the University of Missouri, can be explained by the information found in Tables 2 and 3. Mean GPA's received in the community college prior to transfer were compared with mean GPA's received one semester after transfer for each of the colleges for the years 1966 (Table 2) and 1967 (Table 3).

Insert Table 2 About Here

An examination of the tables show the following: (1) The GPA's received at the University of Missouri are significantly lower than those GPA's earned prior to transferring from the junior college in three of the four colleges studied; (2) The range of GPA differences was -.17 to -.74.

Insert Table 3 About Here

The differences in mean GPA's received in each of the four colleges prior to transfer was computed and is shown in table 4 for the two years. There was no significant difference in the mean GPA's transferred to the university in 1966 and in 1967 from any of the four junior colleges.

Insert Table 4 About Here

Only College W showed a significant difference in mean GPA received at the university from one year to the next. Table 5 compared the difference in mean GPA received by students from each of the four colleges after one semester of transfer for both 1966 and 1967.

Insert Table 5 About Here

These findings led the investigator to reject the null hypothesis that there is no significant difference to be expected in the GPA achieved in the junior college and the GPA achieved during the first semester after transfer to the University of Missouri.

The second purpose of this study was in reference to there being differences between grade point averages received at the different junior colleges and the grade point averages received during the first semester after transfer to the University of Missouri.

Tables 6 and 7 answer the first half of this question.

Insert Table 6 About Here

Insert Table 7 About Here

An analysis of variance between the four colleges mean GPA before transfer show F ratios to be not significant at the .05 level for both 1966 and 1967. On the basis of these findings

the hypothesis that there is no significant difference in the GPA's received at the different junior colleges prior to transfer to the University of Missouri was accepted. The analysis of variance that was run to test for differences between the mean GPA's of the four colleges for the first semester after transfer for the two years is shown in Tables 8 and 9. Table 8 shows a non-significant F ratio for the year 1966. Table 9, for 1967, shows a significant F ratio which indicates that there are differences to be expected in the way students from different junior colleges will achieve after transfer to the university even though the GPA's before transfer are not significantly different.

Insert Table 8 About Here

Insert Table 9 About Here

The F ratio was large enough to warrant a need for further study into the reasons for such a variation. The F ratio for 1967 (Table 9) is large enough for the investigator to reject the third null hypothesis that there is no significant difference in the mean GPA drop during the first semester after transfer between the four junior colleges' transfers.

Discussion

The "t" tests presented indicate that junior college transferees from colleges W, Y, and Z to the University of

Missouri can expect a significant drop in their GPA's during the first semester after transfer. College X transfer students can expect only a slight variation in their GPA after transfer.

The analysis of variance of mean GPA's received for the first semester after transfer among the junior colleges (1967) points to the fact that grading standards at the various junior colleges in Missouri differ.

The admissions office at a university should determine in which junior colleges these differences in GPA are significant enough to warrant differential GPA's for admission to the university. It will only be after such an analysis and differentiation is made that the students from certain junior colleges will be able to be assured of some probability of success in competition at the university and college level. Very few students can afford to suffer the probability of receiving a -.74 drop in GPA (College W, 1967). Such a variation in GPA all but eliminates the 2.00 - 2.30 student from being able to continue toward a four-year degree any further than one semester after transferring.

While ability differences were not controlled in this study, no significant differences in mean GPA were found in any of the four junior colleges prior to transfer between 1966 and 1967. Only one of the four colleges had a significant "t" value between the mean GPA's after transfer (significant at the .05 level but not at the .01 level) for either year.

Summary

This study of junior college transfers at the University of Missouri sought to evaluate the academic success of these students during the first semester after transfer.

The hypotheses were tested with "t" values between mean GPA's of individual junior colleges. Analysis of variances were computed for testing the significance of differences between the four junior colleges before and after transfer.

The four largest feeder junior colleges (two public and two private) to the University of Missouri made up the sample for this study.

It appears likely that the 2.00 average required for transfer to the University of Missouri may not be realistically high enough for students transferring from certain Missouri junior colleges. Larger samples are needed to further establish this fact but the findings do support the need for close scrutiny and possible diversity in the admissions offices' policies concerning junior college transfer students to the college and university level.

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TABLE 1

Transfer Students in the Study

Junior College	Year	Number of Transfers	Number Included in Sample
W	1966	81	31
	1967	99	31
X	1966	52	30
	1967	36	33
Y	1966	27	23
	1967	35	30
Z	1966	64	31
	1967	90	30
Total		484	239

TABLE 2

Test of Significance Between Mean GPA's Received Before and After Transfer for Each Junior College for the Year 1966

College	GPA Before Transfer	GPA After Transfer	Difference	t Values
W	2.45	2.05	-.40	2.99*
X	2.46	2.29	-.17	1.41
Y	2.62	2.22	-.40	2.68*
Z	2.58	1.91	-.67	4.57*

*Significant at the .05 level.

TABLE 3

Test of Significance Between Mean GPA's Received Before and After Transfer for Each Junior College for the Year 1967

College	GPA Before Transfer	GPA After Transfer	Difference	t Values
W	2.49	1.75	-.74	10.33*
X	2.68	2.45	-.23	1.52
Y	2.54	1.93	-.61	5.43*
Z	2.64	2.22	-.42	2.78*

*Significant at the .05 level.

TABLE 4

Test of Significance Between Means for

Years 1966 and 1967; GPA's Before Transfer

College	1966 GPA Transferred	S.D.	1967 GPA Transferred	S.D.	Difference	t Values
W	2.45	.45	2.49	.23	.04	.44
X	2.46	.44	2.68	.48	.22	1.95
Y	2.62	.46	2.54	.35	-.08	.80
Z	2.58	.43	2.64	.50	.06	.49

t, not significant.

TABLE 5

Test of Significance Between Means for Years 1966 and 1967: GPA's 1st Semester After Transfer

College	1966 GPA Transferred	S.D.	1967 GPA Transferred	S.D.	Difference	t Values
W	2.05	.67	1.75	.52	-.30	2.03*
X	2.29	.63	2.45	.77	.16	.92
Y	2.22	.73	1.93	.82	.29	1.53
Z	1.91	.71	2.22	.72	.31	1.64

*Significant at the .05 level.

TABLE 6

Analysis of Variance

GPA's Prior to Transfer, 1966

Source of Variation	df	ss	Mean Square	F
Between	3	.70	.23	1.11
Within Groups	111	22.48	.20	
Total	114	23.18		

F, not significant.

TABLE 7

Analysis of Variance

GPA's Prior to Transfer, 1967

Source of Variation	df	ss	Mean Square	F
Between	3	.77	.26	1.44
Within Groups	120	21.94	.18	
Total	123	22.71		

F, not significant.

TABLE 8

Analysis of Variance

GPA's 1st Semester After Transfer

1966

Source of Variation	df	ss	Mean Square	F
Between	3	2.30	.77	1.64
Within Groups	111	51.69	.47	
Total	114	53.99		

F, not significant.

TABLE 9

Analysis of Variance

GPA's 1st Semester After Transfer, 1967

Source of Variation	df	ss	Mean Square	F
Between	3	9.77	3.25	6.37*
Within Groups	120	61.37	.51	
Total	123	71.14		

*Significant at the .05 level.

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